

Claims

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3 1. In a computer system having; a file system that controls reads and  
4 writes to a set of disks, a RAID subsystem providing redundancy among groups of said  
5 disks, and wherein said file system or said RAID subsystem is responsive to inactivity of  
6 one or more disks to reconstruct data from those inactive disks; a method, including  
7 identifying one or more disks to be made temporarily inactive;  
8 responding, by said file system, to said identification by marking said  
9 identified disks read-only; and  
10 indicating when said inactive disks are made active again.  
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13 2. The method of claim 1, wherein said identifying includes a systems  
14 operator or the system itself determining that one or more disks are to be made temporar-  
15 ily inactive.  
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17 3. The method of claim 1, wherein said marking includes recording in  
18 one of a set of off-line markers that said disk is read only.  
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20 4. The method of claim 3, wherein one each of said off-line markers is  
21 associated with a disk in said RAID subsystem.  
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1           5.     The method of claim 4, wherein said set of off-line markers includes  
2 a set of binary addresses.

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4           6.     The method of claim 1, wherein said indicating includes a systems  
5 operator or the system itself determining that one or more inactivated disks should be re-  
6 activated.

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8           7.     The method of claim 6, wherein said indicating further includes iden-  
9 tifying the disk or disks to the system that should be reactivated.

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12           8.     The method of claim 7, wherein the off-line marker bit associated  
13 with said disk is cleared allowing said disk to be active and enabled for read/write without  
14 reconstruction of data within said RAID subsystem.

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16           9.     In a computer system having a file system that controls, reads and  
17 writes to a set of disks, a RAID subsystem providing redundancy among groups of said  
18 disks, and wherein said file system or said RAID subsystem is responsive to inactivity of  
19 one or more disks to reconstruct data from those inactive disks; an apparatus including a  
20 memory and a processor, wherein said memory includes  
21 an instruction for identifying one or more disks to be made temporarily inactive;

1 an instruction for responding, by said file system, to said identifica-  
2 tion by marking said identified disks read-only; and  
3 an instruction for indicating when said inactive disks are made active  
4 again.

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6 10. The apparatus of claim 9, wherein said instruction for identifying in-  
7 cludes an instruction initiated by a systems operator or the system itself for determining  
8 that one or more disks are to be made temporarily inactive.

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10 11. The apparatus of claim 9, wherein said marking includes an instruc-  
11 tion for recording in one of a set of off-line markers that said disk is read only.

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13 12. The apparatus of claim 11, wherein one each of said off-line markers  
14 is associated with a disk in said RAID subsystem.

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16 13. The apparatus of claim 12, wherein said set of off-line markers in-  
17 cludes a set of binary addresses.

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19 14. The apparatus of claim 9, wherein said instruction for indicating in-  
20 cludes an instruction initiated by a systems operator or the system itself for determining  
21 that one or more inactivated disks should be reactivated.

1           15. The apparatus of claim 14, wherein said instruction for indicating  
2 further includes an instruction for identifying the disk or disks to the system that should  
3 be reactivated.

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5           16. The method of claim 15, wherein the off-line marker bit associated  
6 with said disk is cleared allowing said disk to be active and enabled for read/write without  
7 reconstruction of data within said RAID subsystem.

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9           17. A processor readable medium said medium encoded with data in a  
10 data structure including a set of binary addresses wherein each one of said binary ad-  
11 dresses is linked to a set of disks in a RAID subsystem.  
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